# BREVARD COUNTY DINNER
# COCOA BEACH, FLORIDA
# TUESDAY, SEPTEMBER 22, 1992

Thank you, Congressman Bacchus, for that introduction. Let me express my appreciation to the Brevard [bra-VARD] County Economic Development Corporation and Brevard County Manufacturers Association for inviting here tonight.

One of the challenges we face as a society -- certainly in this period of slow economic growth -- is to focus <u>not</u> on our present problems, but on our future.

I believe one of the reasons we're having problems with our economy is that we're not investing in our future to the degree we should.

The people alive during my life have consumed more of the world's resources than all those living in prior generations of human history. We've already used more than we deserve, and now we're stealing from the future to buy the creature comforts of today.

While the rest of the world gears up for the economic competition of the post-Cold War era, America is chowing down on its seed corn to feed its belly today.

Recently, NASA scientist Rick Chappell was jogging through the wildlife refuge that surrounds the launch pads when he noticed an armadillo by the trail. Later, he looked up and saw an eagle.

Reflecting on this experience, Rick later wrote, "I was struck by the contrast of their different approaches to life. Where the armadillo never looks up -- concentrating only on its next meal, and oblivious to the world around it -- the eagle soars quietly and majestically. It is not rooting around the ground, but is striving for the high ground -- seeking a vantage point from which to see the horizon and beyond."

The first spacecraft that landed on the Moon wasn't called the armadillo; \\ it was the Eagle -- the symbol of America. \ This nation didn't become the greatest in the world by keeping our eyes on the ground. America is about broad visions, about looking over the horizon toward the future, and then blazing the trail for others to follow.

Technology is the fuel in our economic furnace. Technology creates growth. It creates whole new industries and new jobs --high paying, high quality jobs that add value to our economy.

NASA's research and development of advanced technology reaches out into the future to bring back opportunities to the world of today. Between 1979 and 1986, the new products generated from NASA science and engineering created over 350,000 new jobs in this country. I point out that these jobs were created from only 248 tech transfer projects tracked during this period. There were many more.

NASA has been driving technology forward ever since it was created.

Apollo brought us untold bounty -- especially in medical technology. Pacemakers, CAT scans, arthroscopic surgery, intensive care monitoring equipment -- all got their start because of research NASA needed to go into space. Mission Control's computer networks and software are the great grandfathers of what runs America's telephone system, banking and credit card networks, and airline computer networks.

But we can't keep living off Apollo's bounty. Space Station Freedom will revolutionize our way of life in the 21st century the same way the Apollo program did in the 20th century.

A permanent space station will be the place where we become a true space-faring nation -- the place where we learn how to keep humans healthy for long durations in space.

All of our plans to build an outpost on the Moon and explore Mars depend on using Space Station Freedom to learn how to protect astronauts' health from the effects of long duration space travel.

While these studies are going on, the space station will have dual use lab equipment where scientists can systematically study how living organisms and other materials behave without gravity. Essentially, the space station should be thought of as a research center in orbit.

Researchers from universities and the private sector, and our international partners, will be able to share facilities on Freedom to do basic research in advanced materials, biotechnology, and life sciences.

Product improvements developed from this research have the potential to create new jobs, keep America competitive, and save lives with new drugs and medical knowledge.

Of course, Kennedy Space Center will be at the heart of space station operations.

One-tenth of NASA's total budget flows through Florida. In the last fiscal year, Kennedy Space Center injected $1.4 billion in the Florida economy -- almost all of it here in Brevard (bra-VARD) County. KSC employs 19,000 people -- most of them, over 16,000, through contractors.

These figures paint only part of the picture of how NASA affects the economy. They do not include secondary jobs created as a result of NASA workers spending their paychecks, or entire new industries generated through NASA technology transfers to the private sector.

Technology transfer isn't a one-way street, though. NASA and the big aerospace firms don't have a monopoly on good ideas.

Through NASA's Small Business Innovation Research Program, small high tech firms develop technology that NASA needs, but also has significant commercial applications.

For example, Schwartz Electro-Optics in Orlando invented a tunable-frequency laser for remote measurement of the chemical make-up of the atmosphere. So far, they've had commercial sales exceeding $400,000.

Irvine Sensors, a California firm, developed a three-dimensional way to stack integrated circuits that would increase personal computer speed and decrease the main circuit board to the size of a sugar cube.

As these examples illustrate, these are small businesses with big ideas. Their employees have the entrepreneurial spirit and can-do attitude that NASA needs if we're going to do things faster, better, and cheaper, and provide technology to benefit the U.S. economy.

Small businesses create more than two-thirds of the jobs in this country. That's why NASA is shifting some of our attention away from the aerospace giants. We'll keep working with the big contractors, of course, and help them get more efficient. But we're also going to open up our arms to bring in more small and disadvantaged businesses to take advantage of the full diversity of America.

One of the ways to do this is simplify the incredibly complex set of procurement rules that govern contracts valued between $25,000 and $500,000. These bewildering rules are as cumbersome for NASA to deal with as they are for small business. Mid-range procurements between $25,000 and $500,000 represent only 15 percent of the total dollar value of NASA contracts, but account for over 80 percent of our procurement actions.

Buying a relatively simple piece of equipment, or routine support services, should not be governed by all the same complex requirements that apply when we buy something like the space station crew module. Yet, in many cases, the same rules apply.

We know small business owners don't have the time or money to jump through all these hoops, so we're working with Congress and the Executive Branch to change it, and give small businesses a chance to compete.

We're trying to shrink requests for proposals and contracts from 90 or 100 pages down to ten. We'd like to have electronic bulletin boards so small businesses can dial in and find out about new opportunities. And we want to empower our contracting officers to act so you don't have to go up and down the whole NASA chain to get approval.

NASA is also committed to increasing participation by minority- and woman-owned firms. We've set a goal of contracting 8 percent with small disadvantaged businesses by 1994.

In fiscal year 1991, $717 million went to these firms.

We intend to do better. Last month, KSC granted a $75 million contract for applied research and technology to an 8(a) firm. And the new $2.7 billion KSC base operations contract stated in its request for proposal that 30 percent must be subcontracted to small businesses, disadvantaged businesses, and women-owned businesses.

When you add it all up, the return America receives from NASA is enormous. We invest only 1 percent of the federal budget in NASA, and 1/4 of one percent of the gross national product. And contrary to what some people say, we don't spend any money in space. There aren't any businesses or banks up there -- yet. We spend it right here on Earth, for the people of Earth.

Life on Earth is better because of the lives we've sent into space.

We're fortunate to have a president and vice president, and supporters in Congress like Representative Bacchus, who understand how important space is to the strength, and competitiveness, and future economic growth of America.

Once we learn what we need to know about living and working in space on Space Station Freedom, the next step will be to go back to the Moon, and on to Mars.

The Moon is the perfect place for astronomy -- a place where we can build telescopes and interferometers capable of seeing planets around nearby stars. On Mars, we will attempt to answer the age-old question of whether life ever appeared anywhere besides Earth.

Going to the Moon and Mars, though, is just the first step in getting to know the neighborhood that is our solar system. You see, it's by studying the rest of the solar system that we can fully understand what's happening to our own planet -- our atmosphere and environment.

The secrets of how our solar system, our planet, and life itself began, are written on the planets, moons, asteroids, and comets.

For instance, since the Moon has no atmosphere, the lunar soil acts like a tape recorder of the sun's radiation output for millions of years. That could tell us a lot about the climate of prehistoric Earth.

Venus is the same size as Earth, but with a runaway greenhouse effect. Why?

Mars may have started out like Earth, with a dense atmosphere and surface water. Now it's in a permanent ice age. Why?

How does solar activity effect our climate? Shortly after Galileo invented the telescope, there was a 70-year period in which almost no sun spots were observed and the Earth experienced what is known as the Little Ice Age.

As you can see, what's happening in space affects what's happening on Earth. After all, we may live on the surface, but the Earth itself is traveling through space.

Yes, we must take care of our domestic and social concerns, but we must also look outward -- look ahead -- and move on to the next frontier. It is by reaching out into space -- exploring the unknown -- that we will create inspiration, hope, and opportunity for growth so that our children will have an even better future than what our parents left us.

Let me leave you with a snapshot from the future. It's early in the next century, and a woman in Miami goes to her doctor to receive a shot to prevent osteoporosis. That night, she sees on TV that a young astronaut at Kennedy Space Center just received the same shot to prevent bone loss before blasting off on the long journey to Mars.

That young astronaut grew up in Houston, where decades before, her father did medical research on Space Station Freedom.

Her father's work had inspired her to study organic chemistry so that when the time came, she'd be qualified to go search for signs of life on Mars. \

The exploration of space is the most inspirational adventure of all time. And it pays back economic opportunities as we develop technology and new knowledge along the way.

We're in a time of change -- a time of transition -- a time of possibilities. But with your support, we'll be able to turn all our dreams into realities. Thank you very much.

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EXCERPTS OF REMARKS
NASA ADMINISTRATOR DANIEL S. GOLDIN
COCOA BEACH, FLORIDA
SEPTEMBER 22, 1992

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